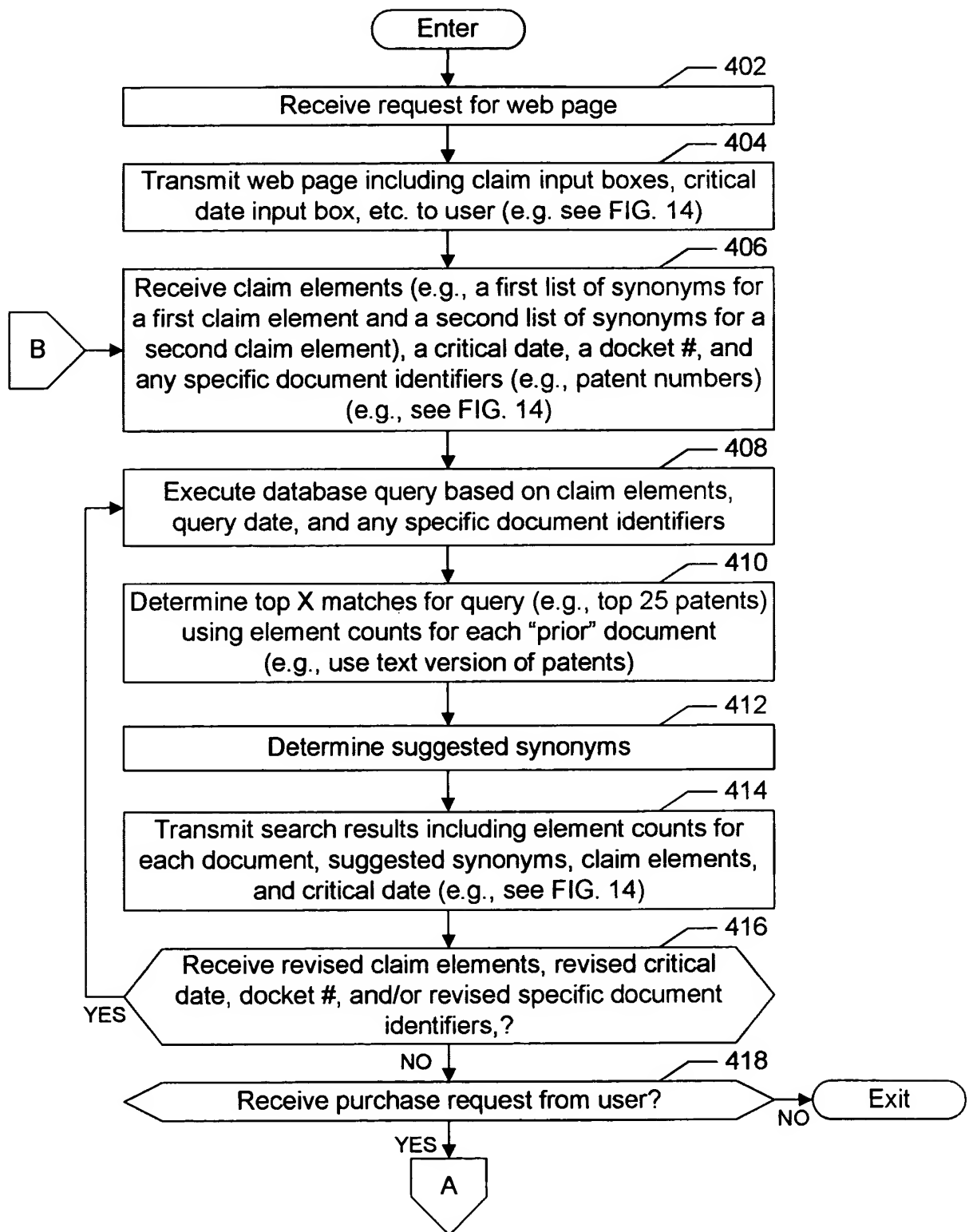
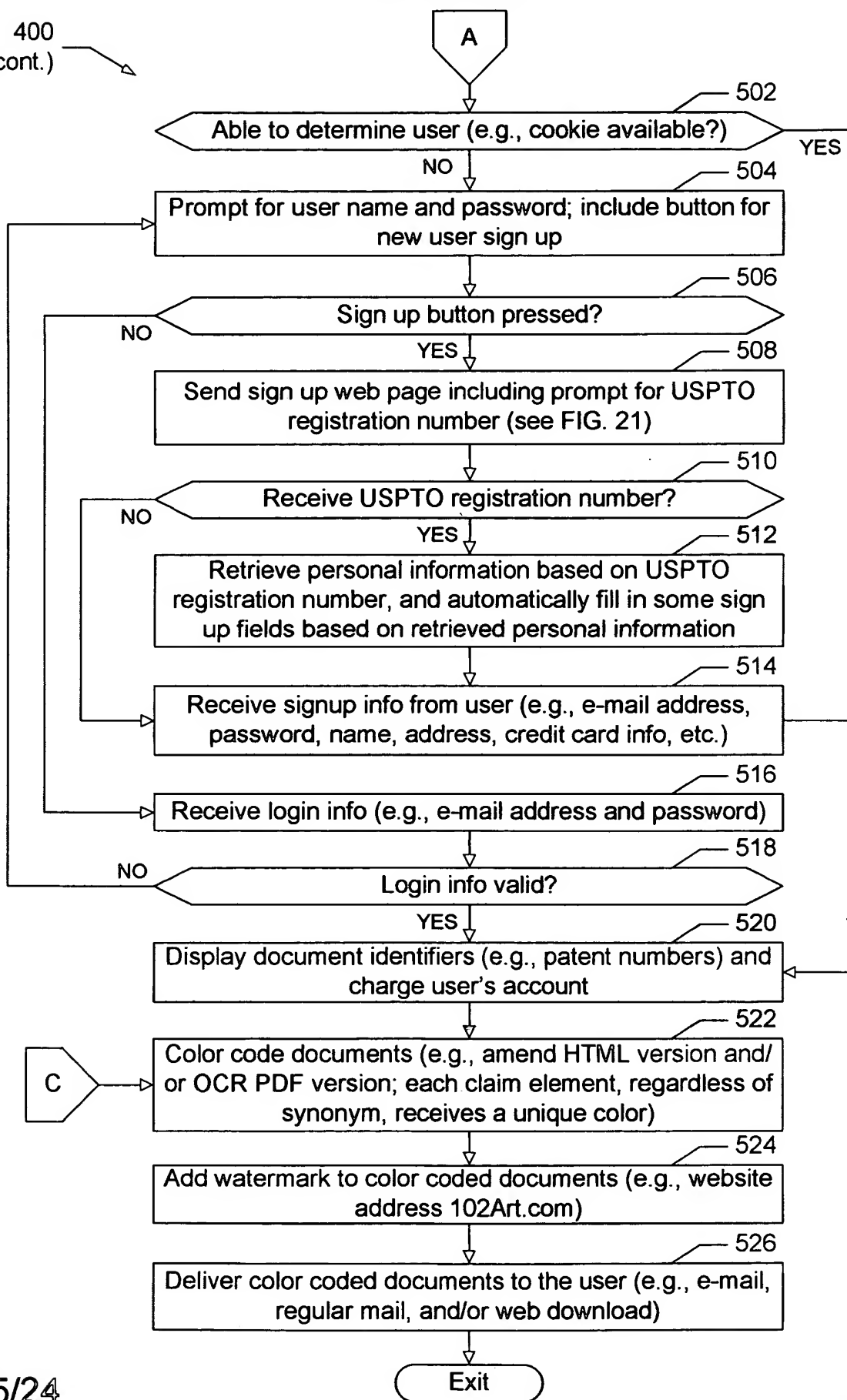


FIG. 3

Process For Searching And
Analyzing Prior Art 400

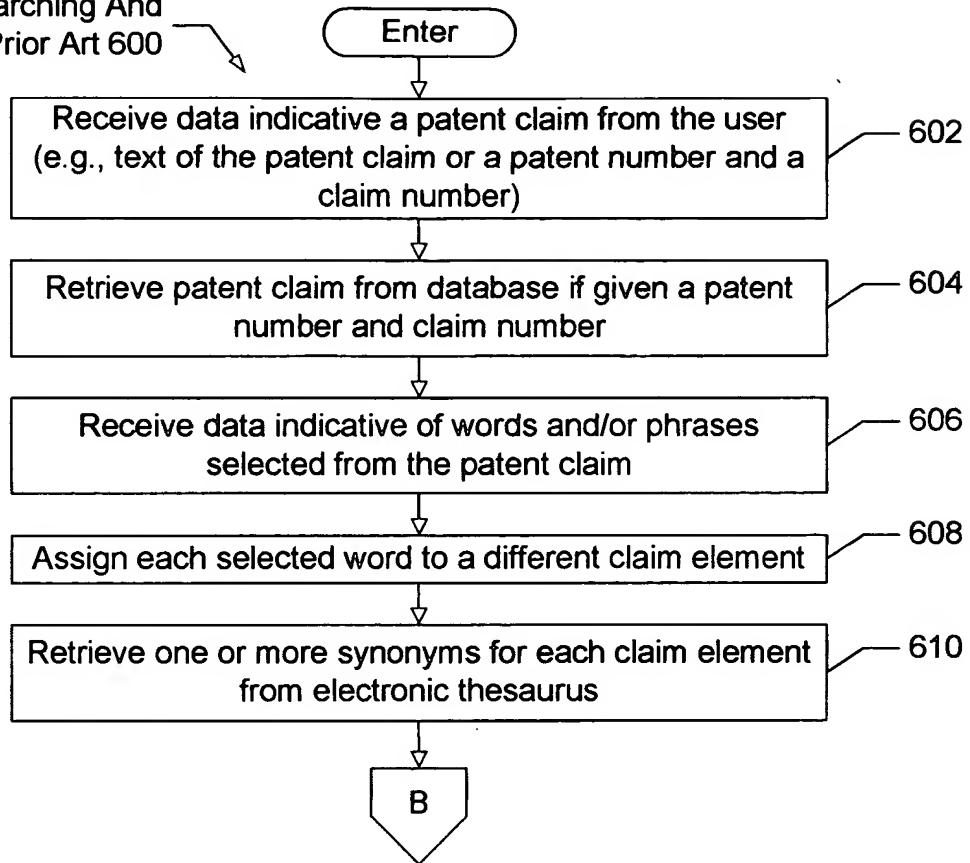


400
(cont.)



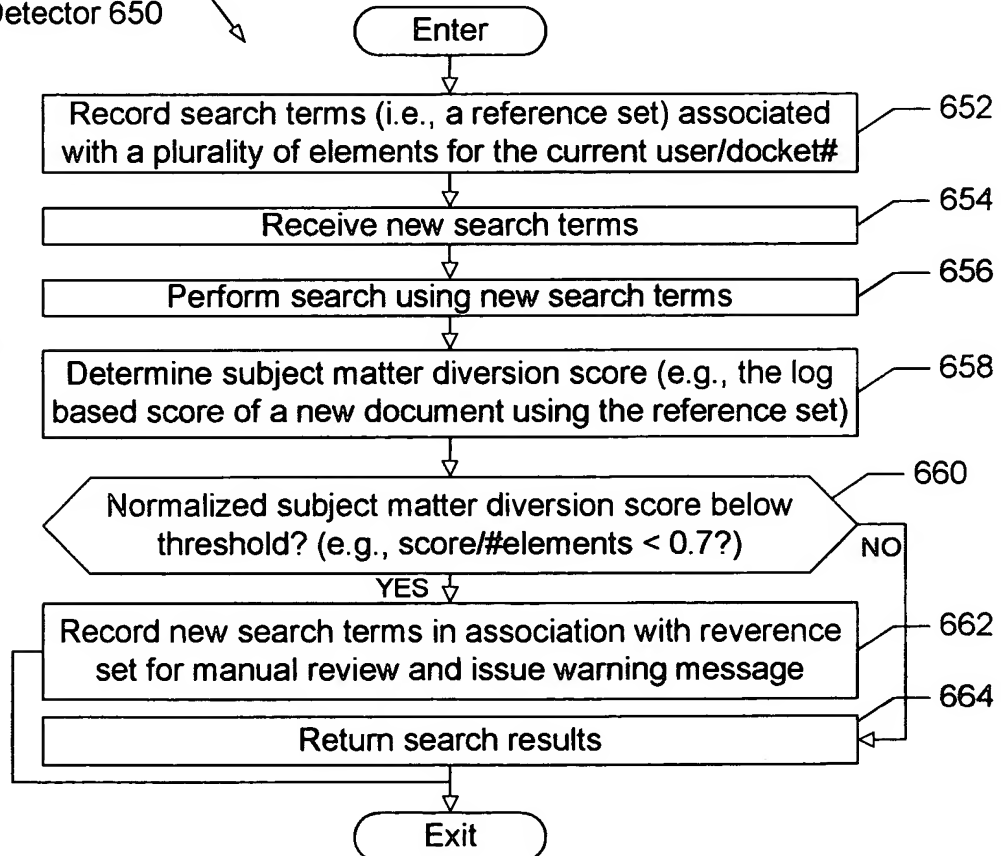
Process For Searching And
Analyzing Prior Art 600

FIG. 6a

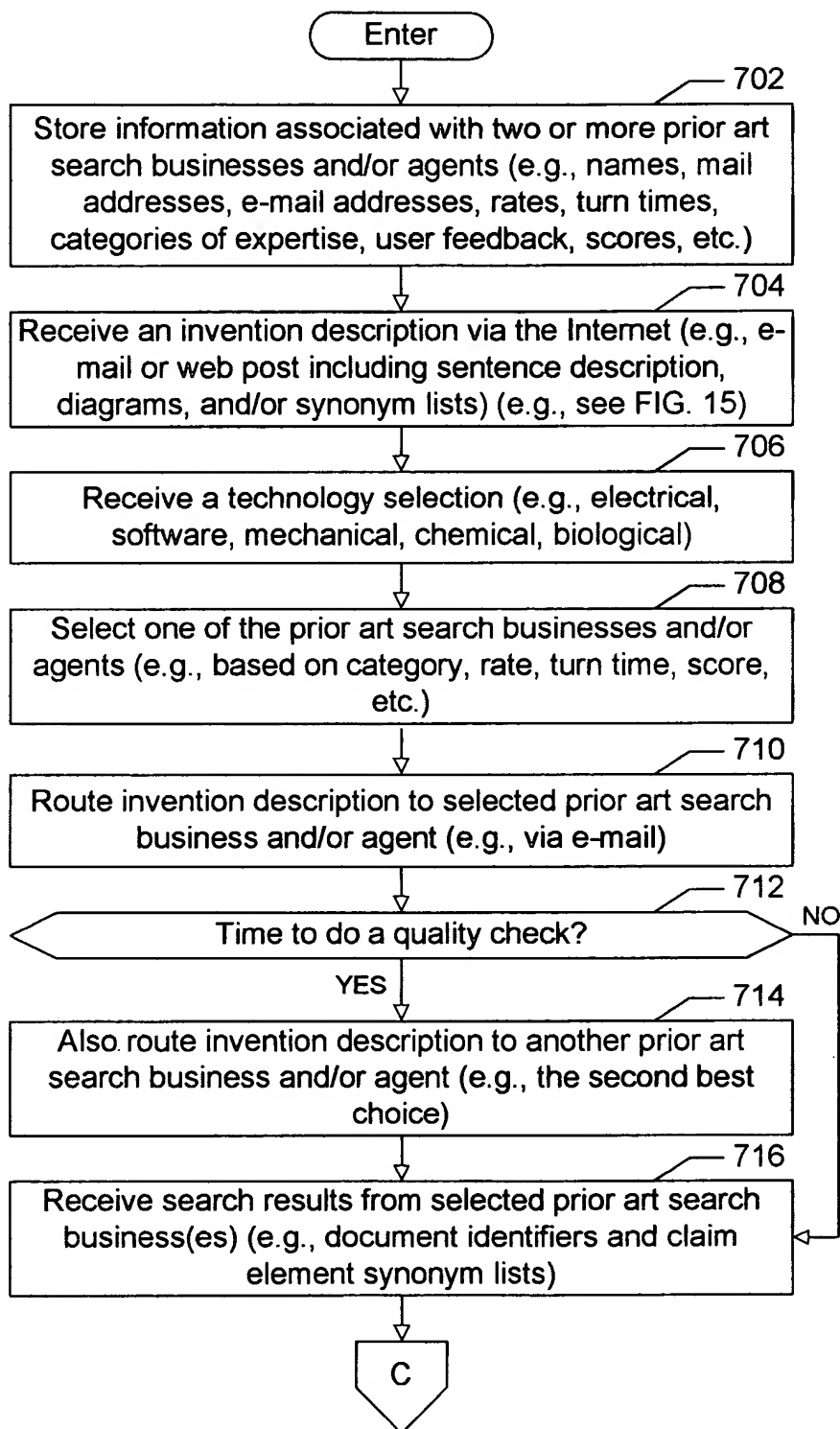


Subject Matter Diversion
Detector 650

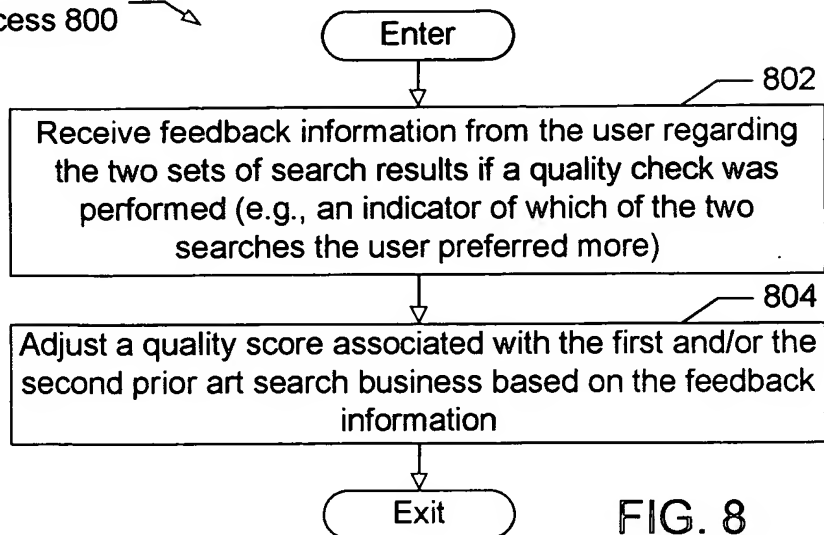
FIG. 6b



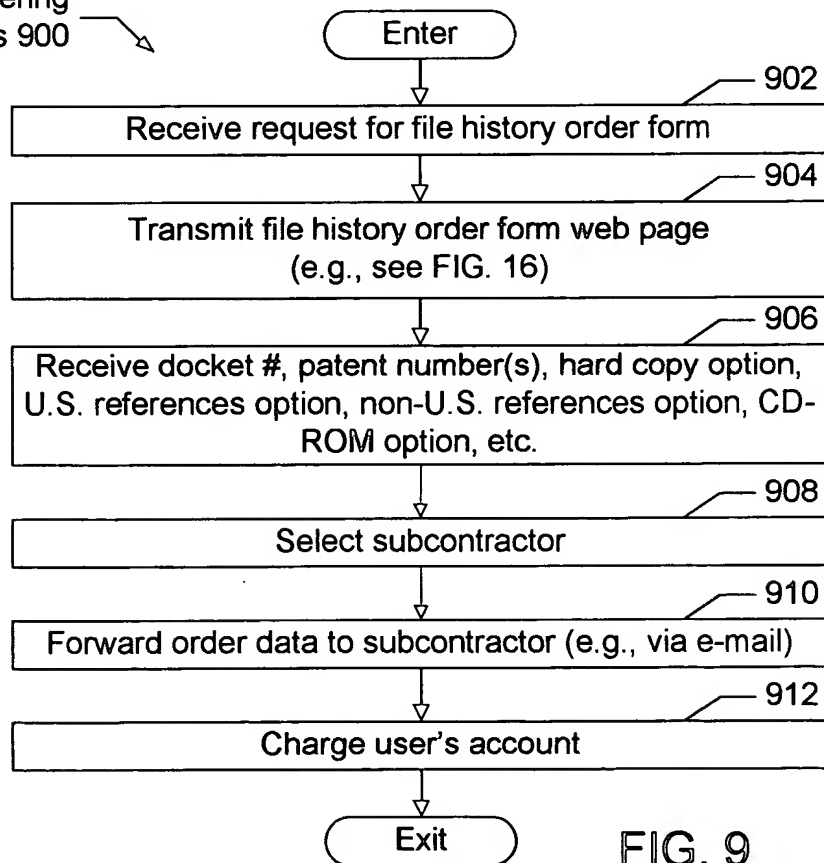
Search Firm Selection
Process 700



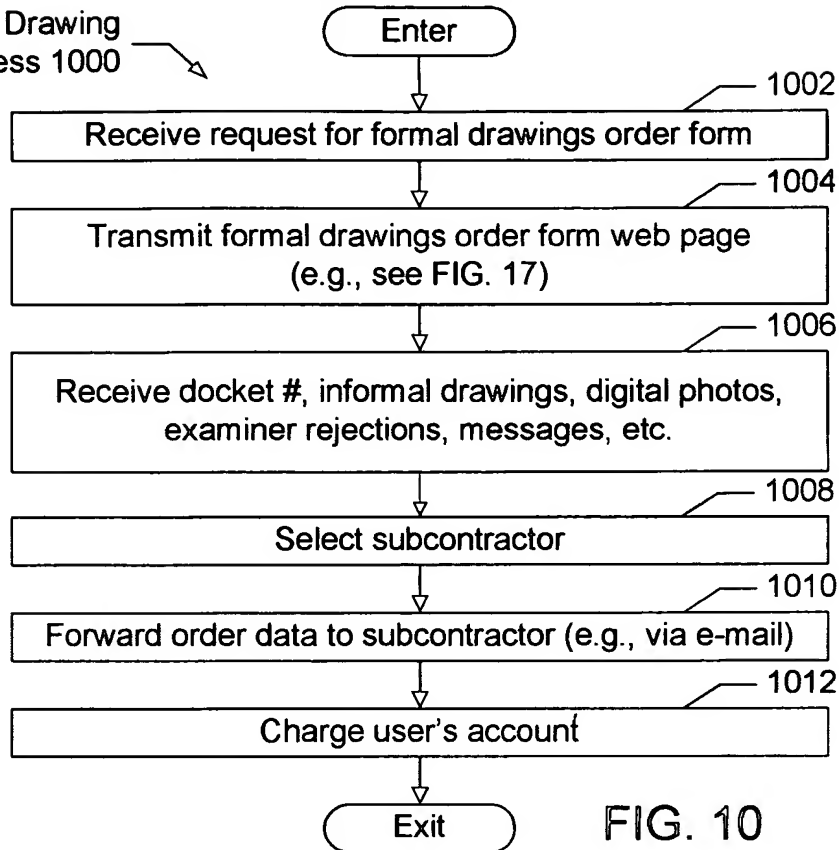
Search Firm Score
Adjustment Process 800



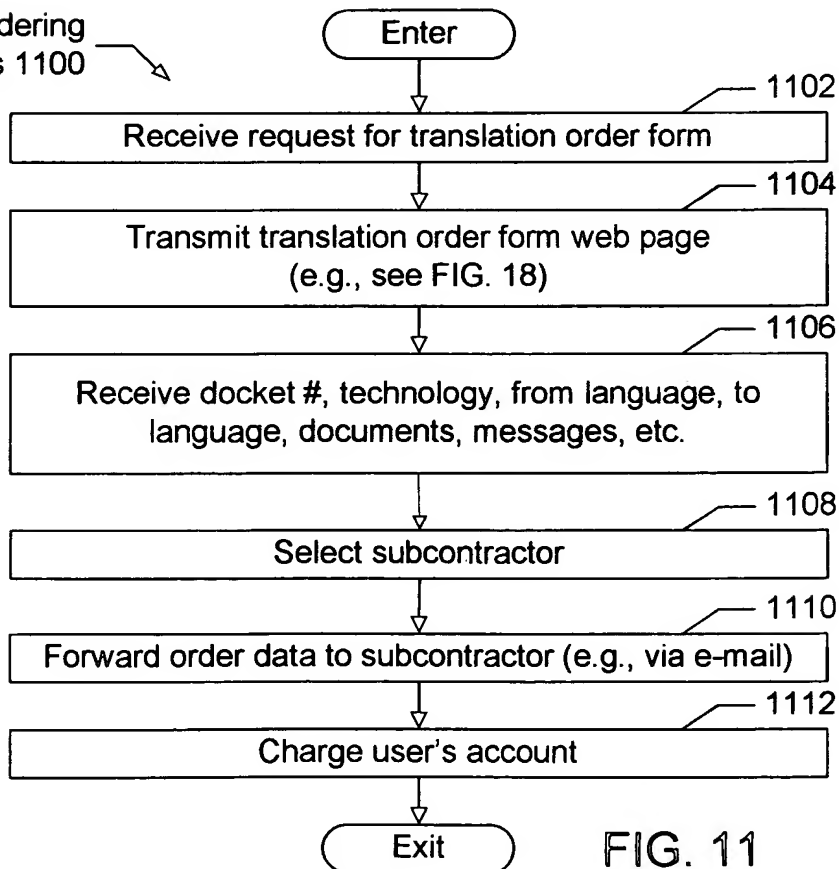
File History Ordering
Process 900

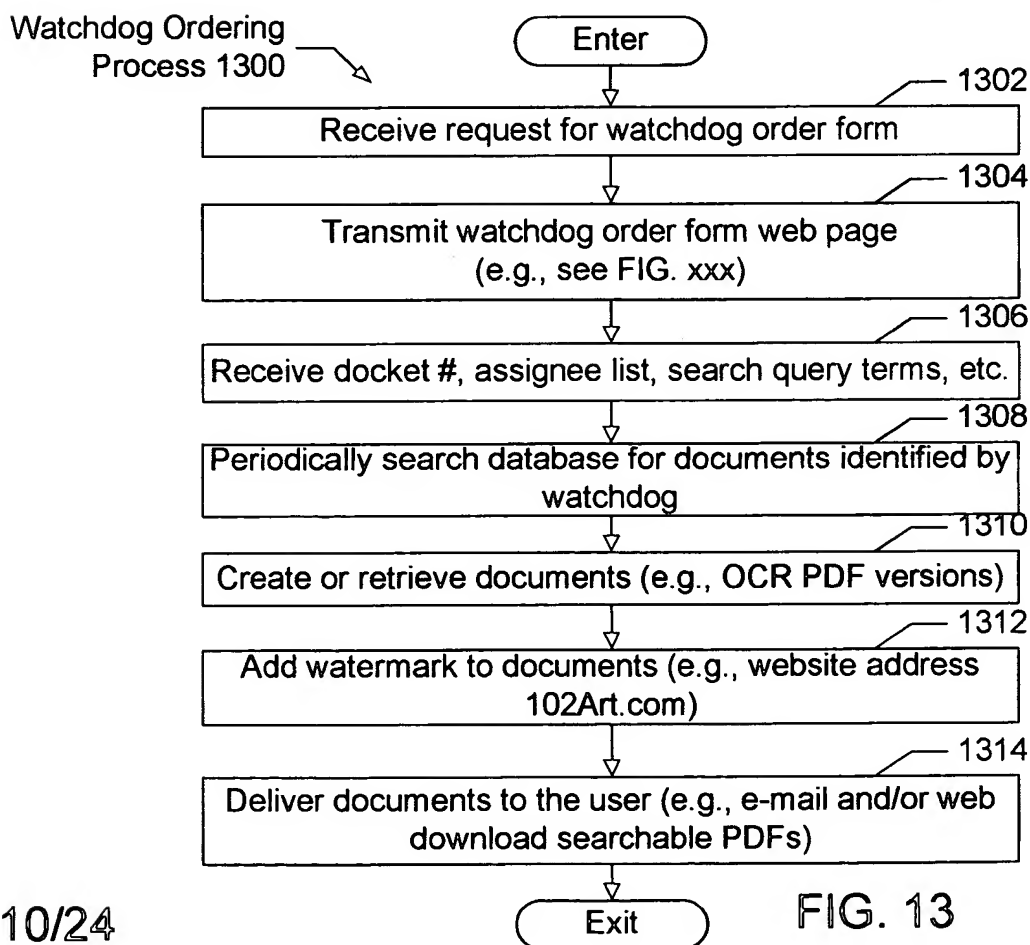
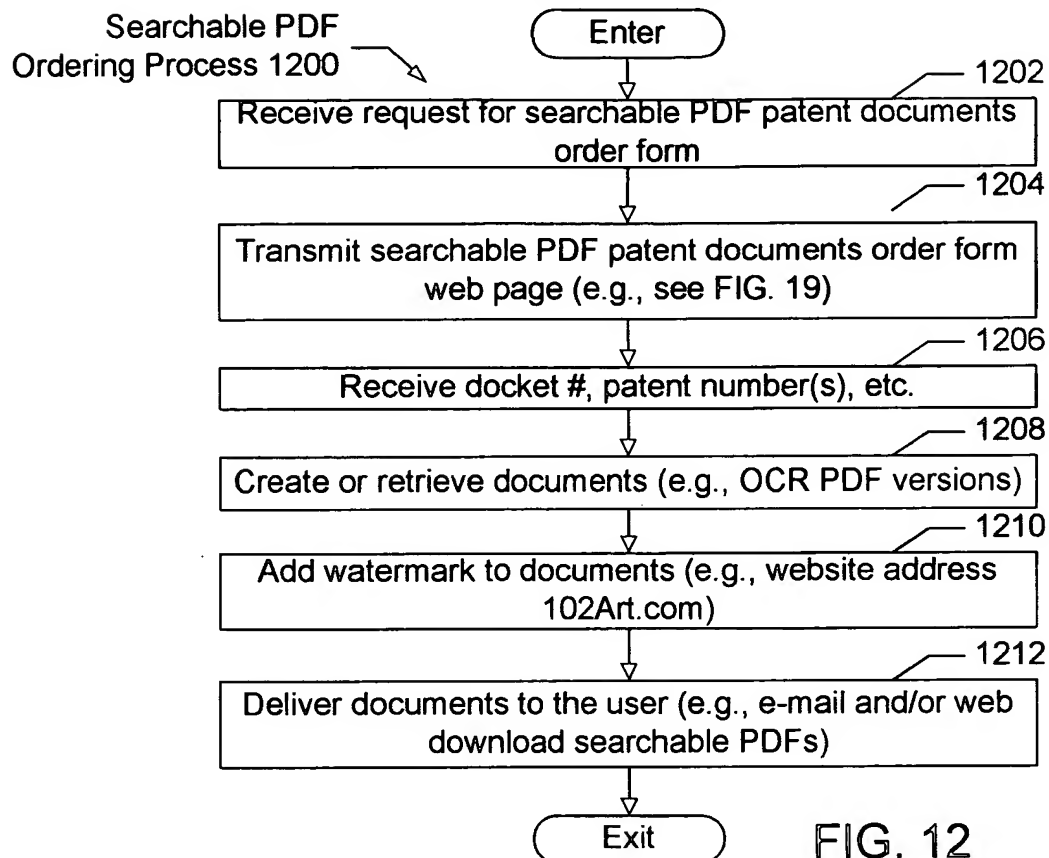


Formal Drawing
Ordering Process 1000



Translation Ordering
Process 1100





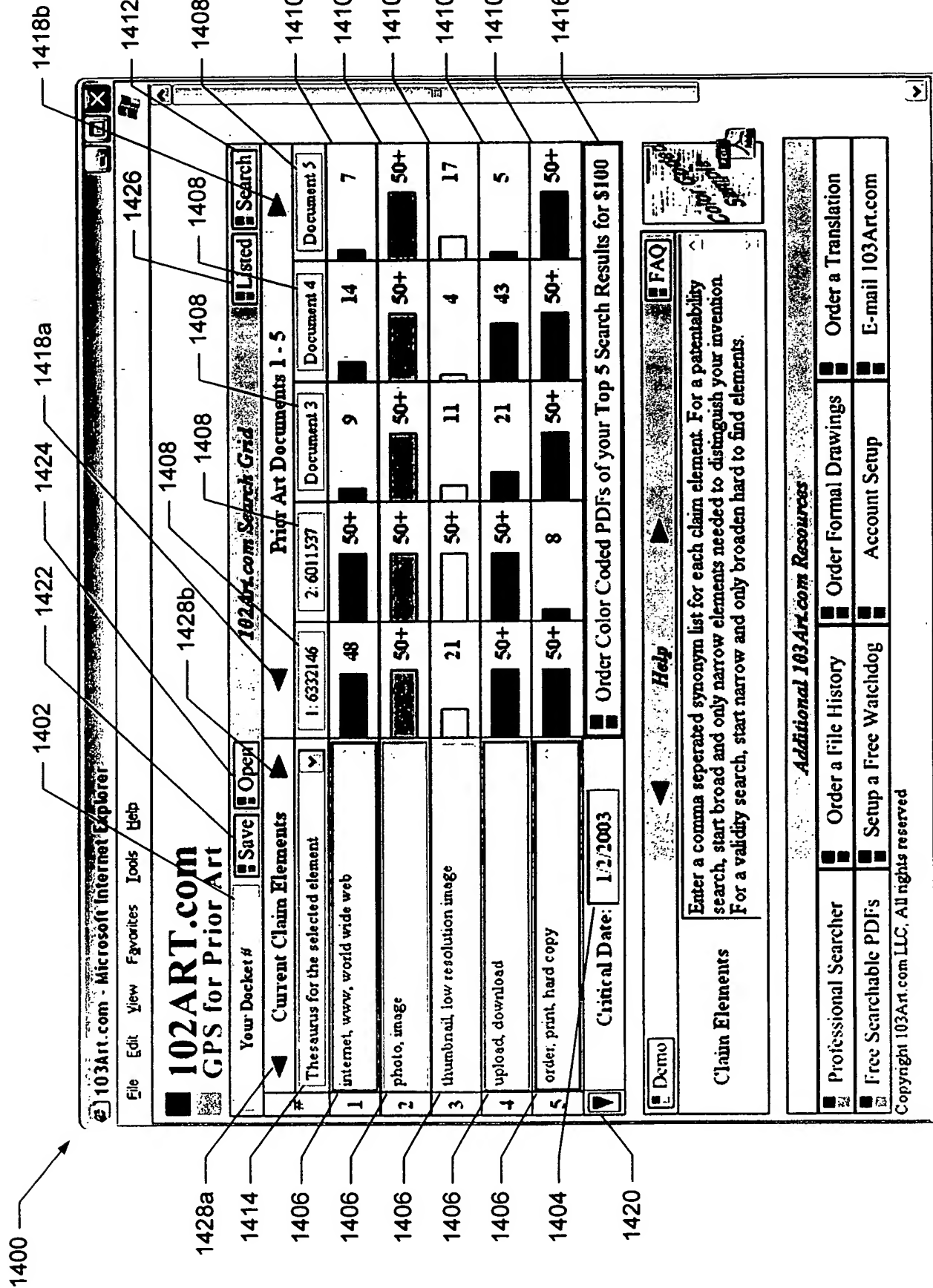


FIG. 14a



1500 —

1502 —

1504 —

1506 —

1508 —

1510 —

1512 —

103ART.com
Obvious Differences

Professional Search

Your Docket #

☐ Electrical/Software ☐ Mechanical ☐ Chemical ☐ Bio ☐ Other

Search Letter

Submit

Browse...

Help

Point to any area for help

Copyright 103Art.com LLC, All rights reserved

1600

1602

1604

1606

1608

103ART.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

103ART.com
Obvious Differences

Your Docket #

Patent Numbers

Options

☒ Bound and tabbed hard copy within 3 business days (\$1/page)
☒ Include copies of U.S. patent references (\$3/patent)
☒ Include copies of non-U.S. patent references (\$1/page)
☐ Put everything on a CD-ROM (50¢/page)

Copyright 103Art.com LLC, All rights reserved

File Histories

Submit

1700

103Art.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

103ART.com
Obvious Differences

Your Docket #

Press the "Browse" button and locate your informal drawings, photos, examiner rejections, etc.

Formal Drawings

Informal Drawings

Message to Illustrator (optional)

Notes

A first draft of your formal drawings will arrive as a PDF via e-mail in about two weeks.
Your account will be charged as follows:
\$65 for each simple drawing (e.g., simple flowcharts and block diagrams) - See an example
\$90 for each average drawing (e.g., moderately detailed mechanical drawings) - See an example
\$130 for each complex drawing (e.g., highly detailed mechanical drawings) - See an example

Copyright 103Art.com LLC, All rights reserved

1702

1704

1706

1710

1712

1712

1712

1714

1708

1800 →

103Art.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

103ART.com
Obvious Differences

Your Docket # _____

☐ Electrical/Software ☐ Mechanical ☐ Chemical ☐ Bio ☐ Other

Translations

Technology

Languages

From (e.g., Japanese): _____ To (e.g., English): _____

Documents

Press the "Browse" button and locate the documents you want translated

Message to Translator (optional)

Notes

You will receive an e-mail quote within 1 business day.
Your translated documents will arrive as MS-Word files via e-mail in about two weeks.

Copyright 103Art.com LLC. All rights reserved

1802 — 1818

1804 — 1808

1806 —

1810 —

1812 — 1814

1816

1900 →

1900

1902

1904

1906

103ART.com

Obvious Differences

Free "searchable" PDFs

Submit

Patent Numbers

Your Docket #

Copyright 103Art.com LLC, All rights reserved

Your Docket #		Patent Numbers	

103ART.com

Obvious Differences

Free "searchable" PDFs

Submit

Patent Numbers

Your Docket #

Copyright 103Art.com LLC, All rights reserved

2000 →

2002

2004

2006

103Art.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

103ART.com
Obvious Differences

Your Docket #

Submit

Assignee List

Enter one or more assignees separated by commas (e.g., IBM, International Business Machines):

Submit

Watchdog

Submit

Notes

Whenever a new patent issues to one of the above assignees, we will e-mail you a PDF of that patent at no charge. You can call up and modify an existing watchdog by entering the docket # and pressing the 'Submit' button.

Copyright 103Art.com LLC. All rights reserved

2100

103Art.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

103ART.com

Obvious Differences

Account Setup

Login Info

E-mail:

Password:

Confirm Password:

PTO Registration #:

Company Info

First Name:

Last Name:

Company:

Address 1:

Address 2:

City:

State: ▼

Zip Code:

Telephone:

Payment Info

Card Type: ☐ VISA ☐ MasterCard ☐ Discover ☐ American Express

Card Number:

Expiration Date: Month / Year

Name on Card:

Address 1:

Address 2:

City:

State: ▼

Zip Code:

2102

2104

2106

2200

United States Patent [19]
Garfinkle et al.

[11] **Patent Number:** **6,017,157**
[45] **Date of Patent:** **Jan. 25, 2000**

[54] **METHOD OF PROCESSING [REDACTED]
AND DISTRIBUTING VISUAL [REDACTED]
PRODUCED FROM THE [REDACTED]**

[75] **Inventors:** Philip N. Garfinkle, Herndon, Va.;
Yuseov Ben Yuseov, Jerusalem; Elliot
D. Jaffe, Hashmonaem, both of Israel

[73] **Assignee:** PictureVision, Inc., Herndon, Va.

[*] **Notice:** This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] **Appl. No.:** 08/773,756

[22] **Filed:** Dec. 24, 1996

[51] **Int. Cl.:** G03F 3/10; H04N 1/04

[52] **U.S. Cl.:** 396/639; 395/226; 395/227; 355/40

[58] **Field of Search:** 395/226, 227, 395/230, 234; 355/40, 41, 72, 77; 396/4-29, 639-639

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,417,811 11/1983 Hamer 355/77
4,432,637 2/1984 Hoshung 355/35
4,862,222 8/1989 Hicks 354/75

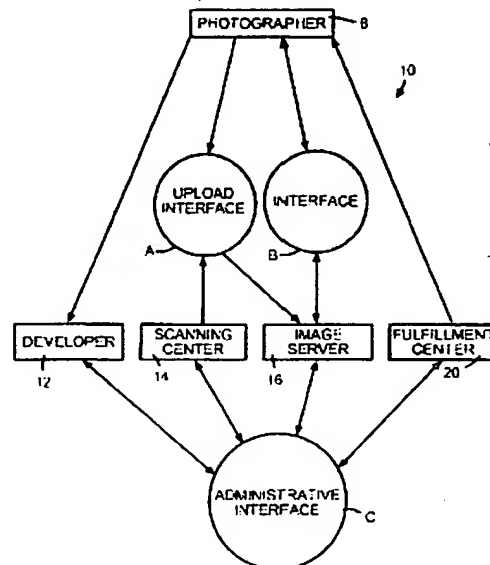
4,862,222 8/1989 Staudt et al. 355/40
4,918,484 4/1990 Ujic et al. 355/41
4,935,809 6/1990 Hayashi et al. 358/76
4,951,086 8/1990 Hicks 355/41
4,974,096 11/1990 Wash 358/302
5,023,655 6/1991 Hicks 355/39
5,070,677 12/1991 Hicks 53/435
5,072,254 12/1991 Hicks et al. 355/50
5,072,256 12/1991 Hicks 355/71
5,093,682 3/1992 Hicks 355/1
5,097,292 3/1992 Hicks 355/75
5,319,401 6/1994 Hicks 354/76
5,321,465 6/1994 Hicks 355/77
5,512,396 4/1996 Hicks 430/21

Primary Examiner—Safet Metjahic
Assistant Examiner—Michael Dalakis

[57] **ABSTRACT**

This invention is directed to a method of processing at least one [REDACTED] of at least one photographic [REDACTED] and distributing at least one visual [REDACTED] produced from the at least one [REDACTED]. The method includes the steps of storing at least one [REDACTED] of at least one photographic image on at least one image [REDACTED] at a first location. Selective authorized access to the at least one digital image of the at least one photographic image from a second location is then facilitated. Orders are received for at least one visual [REDACTED] of the at least one photographic image from the second location. Based upon the orders at least one visual image is produced from the stored digital image at the first location in response to the at least one order.

38 Claims, 18 Drawing Sheets



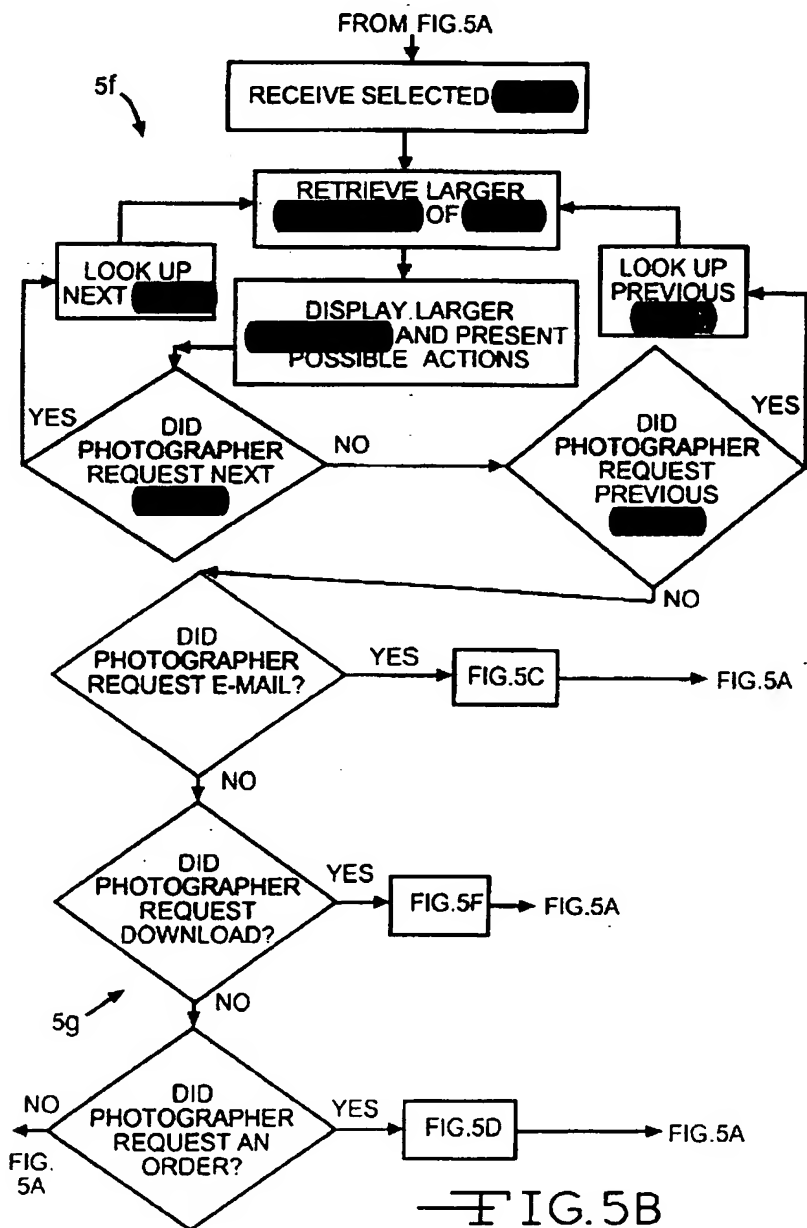
2300 →

U.S. Patent

Jan. 25, 2000

Sheet 9 of 18

6,017,157



2400

6,017,157

5

In a preferred embodiment, an access code is associated with each roll of film 9b, and the [REDACTED] are accessed at the [REDACTED] 16 through the use of the interface B by HyperText Markup Language (HTML) pages on the [REDACTED] or a client interface accessing an [REDACTED] using a proprietary protocol over a computer network such as the [REDACTED]. Examples of a client interface include a plug-in module for the well-known Adobe Photoshop or a stand-alone imaging application specially designed for this purpose.

In a most preferred embodiment, the photographer 8 accesses HTML pages from a WWW browser using either the Secure HyperText Transport Protocol (HTTPS) or HyperText Transport Protocol (HTTP) to access a Netscape Enterprise [REDACTED] running on an Axil 320 Spare acting as the [REDACTED]. The Netscape [REDACTED] is configured with an HTML forms interface which accepts the unique access code and provides access to [REDACTED] (small replicas of the full [REDACTED] of the [REDACTED] in the roll in the form of an online proof sheet. The interface B allows the photographer 8 to perform specific tasks using the [REDACTED] such as the ability to electronically mail (e-mail) an [REDACTED] to another party; download an [REDACTED] to the photographer's home computer 9f, see FIG. 9C; or order a visual [REDACTED] of a specific [REDACTED] in a variety of formats and sizes, such as photographic [REDACTED] or enlargements of photographic [REDACTED] and photographic merchandise including T-shirts, sweatshirts, mugs, mouse pads, puzzles, ties, buttons, electronic slide shows, and other items bearing the [REDACTED].

It will be appreciated that when downloading or e-mailing a [REDACTED] the [REDACTED] of the [REDACTED] is preferably reduced to a screen size of 600x400 pixels or 712x512 pixels. These sizes are more appropriate for screen display of the [REDACTED] and allow faster transfer of the data over a network.

In a preferred embodiment, the [REDACTED] 16 is connected to the [REDACTED] to allow the processed [REDACTED] to be accessed from remote locations (second location) different from and independent of where the film is developed (first location). The [REDACTED] for a roll of film are maintained at the [REDACTED] 16 for a fixed period of time (such as 30 days), after which they are marked as deleted and, after a short grace period (such as 5 days), removed from the [REDACTED] to free up disk space for other [REDACTED]. The grace period allows for fulfillment of orders which occur after a roll is marked deleted to be handled from the [REDACTED] 16, since the roll is still on the [REDACTED] (avoiding the need to reference a backup copy of the roll). In this embodiment, multiple RAID partitions are preferably used so that the [REDACTED] 16 can continue to process new rolls of film when one partition is unavailable due to service or backup procedures as well known in the art. While a number of solutions exist for storing the [REDACTED] links for a particular roll in the RAID partitions, the process described below satisfies several important performance considerations, and is currently preferred. This process selects a directory on the [REDACTED] 16 for storage of the [REDACTED] and assumes that this location is stored along with the related roll information (e.g., access code, name, etc.) in a database (with the access code serving as the primary index). The process for choosing a directory is as follows:

- a) A directory called RAID is used, under which a directory exists for each file system partition (such as aux1, aux2, etc. up to 365 maximum partitions). Partitions are large enough to store a large number of rolls (generally 12-15 Megabytes per roll) but small enough

6

to be backed up to a single tape (with 8 mm. tapes, roughly 7 Gigabytes per partition). (see e.g., 3g and 3d, FIG. 3A). A partition directory is chosen by taking the number of partitions modulo the day of the year.

- b) The preferred Axil machine runs the Solaris operating system (a version of UNIX) and can be configured to run multiple [REDACTED] (by responding to multiple IP addresses, such as [REDACTED] photonet.com, wolf.photonet.com, etc.). To allow for this situation, each partition directory contains a subdirectory for each such site (for example, www, wolf, etc.). (see e.g., ej, FIG. 3A). This allows multiple sites to share a single RAID directory tree.
 - c) If the site directory has a file called "FULL" in it, then the partition is considered unavailable and is not used. (see e.g., 3f, FIG. 3A). If a FULL directory is encountered, then the next numeric RAID partition is used instead (wrapping back to the first directory if necessary). (see e.g., 3o, FIG. 3A). If all directories are full, then the roll processing fails and the roll is not stored in the database or available to the photographer. (see e.g., 3n, FIG. 3A).
 - d) Under the site directory are a number of directories (such as "1," "2," etc. up to 365 maximum directories). This number must be relatively prime with respect to the number of RAID partitions available. (That is, the divisors of one number cannot be divisors of the other. The easiest way to accomplish this is if both numbers are prime.) (see e.g., 3f, FIG. 3A). The [REDACTED] takes the number of directories modulo the day of the year to determine which numeric directory to use. Determining directories based on the day of the year ensures that rolls of film processed on the same day will generally appear in the same directory. (see e.g., 3um FIG. 3B).
 - e) Each numeric directory can store up to 255 rolls of film, since the UNIX file system is most efficient with no more than 255 files in a directory. (see e.g., ej, FIG. 3B). If a numeric directory is full, the next numeric directory is used (wrapping back to "1" if necessary). If all numeric directories are full, the next numeric partition directory is used, as in step C above. (see e.g., 3n, FIG. 3B).
 - f) A directory with a name identical to the roll's access code is created under the calculated numeric directory. (see e.g., 3q, FIG. 3B). Each [REDACTED] in the roll is stored as a separate file in this directory. (see e.g., 3r, FIG. 3B).
- Note that the foregoing procedure is only used to determine the location of the [REDACTED] (see e.g., 3s, FIG. 3B). After the location has been determined, the database entry for the [REDACTED] contains the [REDACTED] location. All future access to the [REDACTED] is performed via the database entry for the [REDACTED].
- As previously mentioned, the preferred HTML interface allows the photographer to view [REDACTED] of the digital [REDACTED]. The preferred [REDACTED] sizes are 16-bit true color [REDACTED] with [REDACTED] of 546x34 pixels, 64x43 pixels, 96x64 pixels, and 160x107 pixels. The [REDACTED] digital [REDACTED] can be generated when the film is originally processed (the preferred method) or on-the-fly when the [REDACTED] are requested by a photographer 8. In either case, the [REDACTED] are cached at the [REDACTED] 16 in a special directory reserved for this purpose. (see e.g., ej, FIG. 3B). Subsequent access to the [REDACTED] may be obtained by retrieving

